

In the Claims:

1-9. (Cancelled)

10. (currently amended) A method for sintering parts using microwaves in a chamber, comprising:

placing at least one green part to be sintered into a container,
the container adapted to retain and move with the at
least one green part; and

subjecting the at least one green part to microwave radiation;

wherein the container is comprised predominately of one or more materials each having an ability to withstand a thermal shock greater than that of alumina.

11. (original) The method of claim 10, wherein each of the one or more materials is selected from a group consisting essential of silicon nitride, alloys of silicon nitride, hexagonal boron nitride and low thermal expansion ceramics.

12. (original) The method of claim 10, wherein the one or more materials include an alloy comprised of silicon nitride and aluminum oxide.

13. (currently amended) The method of claim 10, further including transporting in a substantially continuous fashion the container retaining and moving with the at least one green part through the chamber using a structure that extends through the chamber.

14. (original) The method of claim 13, wherein the structure is comprised predominately of one or more materials, at least one of which is a material having an ability to withstand thermal shock greater than that of alumina.

15. (original) The method of claim 13, wherein the structure is comprised of one or more materials, at least one of which is a material selected from the group of silicon nitride, alloys of silicon nitride, hexagonal boron nitride and low thermal expansion ceramics.

16. (currently amended) A crucible for carrying and moving with green parts during microwave sintering comprised of one or more materials each having a thermal shock resistance substantially greater than that of alumina.

17. (original) The crucible of claim 16, wherein each of the one or materials is selected from a group consisting essentially of silicon nitride, alloys of silicon nitride, hexagonal boron nitride and low thermal expansion ceramics.

18. (original) The crucible of claim 16, wherein the one or more materials includes an alloy comprised of silicon nitride and aluminum oxide.

19. (currently amended) A microwave sintering furnace comprised of:

a source of microwave radiation;

a chamber coupled to receive the microwave radiation, for sintering green parts;

an elongated structure extending through the chamber for transporting containers ~~carrying~~ retaining and moving with green parts through the chamber in a substantially continuous fashion, the elongated structure being comprised of one or more materials, at least one of which is a material having an ability to withstand thermal shock greater than that of alumina.